UNITED STATES PATENT AND TRADEMARK OFFICE

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Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.	Applicant(s)
Office Action Summary	10/020,299	YLONEN ET AL.
	Examiner	Art Unit
	Jeffrey D. Popham	2137

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>23 December 2005</u>.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-74</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-74</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on <u>07 December 2001</u> is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

Remarks

Claims 1-74 are pending.

Response to Arguments

1.   Applicant's arguments filed 12/23/2005 have been fully considered but they are

not persuasive.

Regarding claim 1, applicant argues that Gbadegesin does not teach or

suggest redirecting a packet from a kernel mode process to a user mode process

when the packet contains digital data that pertains to a certain protocol. As can

be seen at Column 7, lines 50-65, the module 106 is a kernel-mode translation

module that performs the functions of a generalized network address translator

(gNAT). This module 106 will receive a packet, as in Column 8, lines 43-52, that

is destined for TCP port 80. Since the module 106 contains a rule stating that

every packet destined for TCP port 80 is to be redirected to the (user mode)

transparent proxy 104, the module 106 will perform address translation on this

packet, changing the destination address and port to those specified for the

transparent proxy, as seen at Column 8, line 53 to Column 9, line 5. Once the

transparent proxy has the packet, it will perform any needed processing, and

then send the packet to the original target.

Still regarding claim 1, applicant also argues that Gbadegesin does not

teach or suggest determining whether a packet contains data that pertains to a

certain protocol, and then processing the packet at either a packet processor part

or at an application gateway part based on this determination. As discussed above, Gbadegesin does teach determining that the packet pertains to a certain protocol, and then processing the packet at an application gateway part if the packet does pertain to the certain protocol. If the packet does not pertain to the certain protocol, however, it is processed by the packet processor part in one of at least two ways. As can be seen in Column 7, lines 50-65, all packets are observed by the kernel-mode address translation module 106 before being sent, received, or forwarded. This means that every packet will go through the module 106, being processed in some manner, normally by translating the address as needed and then sending the packet either to the transparent proxy or to the destination.

Granted, some of the functionality of Gbadegesin allows the module 106 to avoid sending packets pertaining to a certain protocol or session to the transparent proxy, while sending packets to the transparent proxy that are not part of a specific protocol or session, but this is just additional functionality in the system of Gbadegesin.

Regarding claim 51, applicant argues that Gbadegesin does not teach or suggest receiving a redirected packet at an application gateway from a packet processor part. As explained in the discussion of claim 1, the kernel-mode translation module 106 of Gbadegesin will redirect packets to the transparent proxy, based upon certain rules. The transparent proxy is the application gateway receiving a packet that was redirected from the module 106.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2.   Claims 1-3, 7, 8, 12, 14, 19-31, 33-40, 43-46, 49-55, 58-63, 66-70, 73, and 74

are rejected under 35 U.S.C. 102(e) as being anticipated by Gbadegesin (U.S. Patent

6,754,709).

Regarding Claim 1,

Gbadegesin discloses a method for handling digital data packets at

a logical borderline that separates an untrusted packet-switched

information network from a protected domain, comprising the steps of:

Intercepting, at a packet processor part, a packet that is in transit

between the untrusted packet-switched information network and the

protected domain (Column 7, lines 50-65),

Examining the packet at the packet processor part in order to

determine, whether the packet contains digital data that pertains to a

certain protocol (Column 7, line 66 to Column 8, line 16; and Column 8,

lines 43-52),

If the packet is not found to contain digital data that would pertain to the certain protocol, processing the packet at the packet processor part (Column 7, line 50 to Column 8, line 16), and

If the packet is found to contain digital data that pertains to the certain protocol, redirecting the packet to an application gateway part (Column 7, line 66 to Column 8, line 16; and Column 8, line 53 to Column 9, line 5) and processing the packet at the application gateway part according to a set of processing rules based on obedience to the certain protocol (Column 8, lines 17-30; and Column 8, line 53 to Column 9, line 5);

Wherein the packet processor part is a kernel mode process running in a computer device (Column 7, lines 50-65) and the application gateway part is a user mode process running in a computer device (Column 8, lines 17-30).

Regarding Claim 53,

Claim 53 is a system claim that corresponds to method claim 1 and is rejected for the same reasons.

Regarding Claim 68,

Claim 68 is a software program product that corresponds to method claim 1 and is rejected for the same reasons.

Regarding Claim 2,

Gbadegesin discloses, regarding a packet that is redirected from

the packet processor part to the application gateway part:

Replacing an original value of a certain destination information field

within the packet with a replacement value that identifies the application

gateway part as the destination of the packet (Column 8, line 53 to

Column 9, line 5),

Indicating from the packet processor part to the application gateway

part the original value of the destination information field found in the

packet at the moment of intercepting the packet at the packet processor

part (Column 8, line 53 to Column 9, line 5) and

Using the indicated original value of the destination information field

at the application gateway part in processing the packet (Column 8, line

53 to Column 9, line 5).

Regarding Claim 39,

Claim 39 is a method claim that is broader than method claim 2 and

is rejected for the same reasons.

Regarding Claim 43,

Claim 43 is a method claim that is broader than method claim 2 and

is rejected for the same reasons.

Regarding Claim 51,

Claim 51 is a method claim that is broader than method claim 2 and

is rejected for the same reasons.

Regarding Claim 54,

> Claim 54 is a system claim that corresponds to method claim 2 and
is rejected for the same reasons.

Regarding Claim 62,

> Claim 62 is a device claim that is broader than method claim 2 and
is rejected for the same reasons.

Regarding Claim 66,

> Claim 66 is a device claim that is broader than method claim 2 and
is rejected for the same reasons.

Regarding Claim 69,

> Claim 69 is a software program product claim that is broader than
method claim 2 and is rejected for the same reasons.

Regarding Claim 73,

> Claim 73 is a software program product claim that is broader than
method claim 2 and is rejected for the same reasons.

Regarding Claim 3,

> Gbadegesin discloses replacing an original value of a certain
source information field within the packet with a replacement value that
identifies the packet processor part as the source of the packet (Column 6,
lines 31-57),

> Indicating from the packet processor part to the application gateway
part the original value of the source information field found in the packet at

the moment of intercepting the packet at the packet processor part
(Column 9, lines 26-44) and

Using the indicated original value of the source information field at
the application gateway part in processing the packet (Column 9, lines 26-
44).

Regarding Claim 40,

Claim 40 is a method claim that is broader than method claim 3 and
is rejected for the same reasons.

Regarding Claim 44,

Claim 44 is a method claim that is broader than method claim 3 and
is rejected for the same reasons.

Regarding Claim 52,

Claim 52 is a method claim that is broader than method claim 3 and
is rejected for the same reasons.

Regarding Claim 55,

Claim 55 is a system claim that corresponds to method claim 3 and
is rejected for the same reasons.

Regarding Claim 63,

Claim 63 is a device claim that is broader than method claim 3 and
is rejected for the same reasons.

Regarding Claim 67,

Claim 67 is a device claim that is broader than method claim 3 and

is rejected for the same reasons.

Regarding Claim 70,

Claim 70 is a software program product claim that is broader than

method claim 3 and is rejected for the same reasons.

Regarding Claim 74,

Claim 74 is a software program product claim that is broader than

method claim 3 and is rejected for the same reasons.

Regarding Claim 7,

Gbadegesin discloses that steps of indicating the original values of

certain fields comprise transmitting the original values of such fields from

the packet processor part to the application gateway part separately from

the redirected packet, the certain fields including at least one of a source

field and a destination field (Column 9, lines 26-44).

Regarding Claim 8,

Gbadegesin discloses, at the packet processor part:

Composing a messaging packet that conforms to a messaging

protocol, and inserting the original values of the certain fields into the

messaging packet together with the replacement values (Column 9, lines

26-44), and

Transmitting the messaging packet to the application gateway part

(Column 9, lines 26-44); and

At the application gateway part:

Receiving the messaging packet (Column 9, lines 26-44), and

Associating the original values of the certain fields read from the

messaging packet with the replacement values found in the redirected

packet (Column 9, lines 26-44).

Regarding Claim 12,

Gbadegesin discloses that the step of transmitting from the

application gateway part to the packet processor part a query for the

original values of certain fields, so that the packet processor part only

transmits the original values of the certain fields to the application gateway

part as a response to the query (Column 9, lines 26-44).

Regarding Claim 14,

Gbadegesin discloses that the step of transmitting the original

values of the certain fields from the packet processor part to the

application gateway part running in the same computer device with the

packet processor part through a communications routine that is internal to

that computer device and relies on functions defined in an OS of that

computer device (Column 7, line 50 to Column 8, line 30; and Column 8,

line 43 to Column 9, line 5).

Regarding Claim 19,

Gbadegesin discloses that the step of redirecting the packet to the

application gateway part involves only transferring the packet to a logically

separate entity within the same physical device where the packet

processor part resides (Column 7, line 50 to Column 8, line 30; and

Column 8, line 43 to Column 9, line 5).

Regarding Claim 58,

Claim 58 is a system claim that corresponds to method claim 19

and is rejected for the same reasons.

Regarding Claim 20,

Gbadegesin discloses that the step of redirecting the packet to the

application gateway part involves transferring the packet to a device that is

physically separate from the device where the packet processor part

resides (Column 6, lines 31-57).

Regarding Claim 59,

Claim 59 is a system claim that corresponds to method claim 20

and is rejected for the same reasons.

Regarding Claim 21,

Gbadegesin discloses, after the step of processing the packet at

the application gateway part, the further steps of:

Returning the processed packet from the application gateway part

to the packet processor part (Column 8, line 53 to Column 9, line 5) and

Forwarding such a returned packet from the packet processor part

towards an original destination that the packet had at the moment of it

becoming intercepted (Column 8, line 53 to Column 9, line 5).

Regarding Claim 22,

Gbadegesin discloses composing at the packet processor part a

mapping function that associates a packet redirected to the application

gateway part with an original value of a certain destination information

field that the packet had at the moment of it becoming intercepted

(Column 8, line 53 to Column 9, line 44) and

As a response to receiving a processed packet from the application

gateway part to the packet processor part, using the mapping function to

restore the original value of the destination information field in that

processed packet (Column 8, line 53 to Column 9, line 44).

Regarding Claim 23,

Gbadegesin discloses that the mapping function also associates a

packet redirected to the application gateway part with an original value of

a certain source information field that the packet had at the moment of it

becoming intercepted (Column 6, lines 31-57), and as a response to

receiving a processed packet from the application gateway part to the

packet processor part, the mapping function is also used to restore the

original value of the source information field in that processed packet

(Column 8, line 53 to Column 9, line 44).

Regarding Claim 24,

Gbadegesin discloses transmitting from the application gateway

part to the packet processor part information that associates a processed

packet returned from the application gateway part to the packet processor part with an original value of a certain destination information field that the processed packet had at the moment of it becoming intercepted (Column 6, lines 31-57) and

As a response to receiving a processed packet from the application gateway part to the packet processor part, using the transmitted information to restore the original value of the destination information field in that processed packet (Column 6, lines 31-57).

This is performed with the session identifiers and port numbers that are used between the packet processor part and the application gateway part.

Regarding Claim 25,

Gbadegesin discloses transmitting from the application gateway part to the packet processor part information that associates a processed packet returned from the application gateway part to the packet processor part with an original value of a certain source information field that the processed packet had at the moment of it becoming intercepted (Column 6, lines 31-57) and

As a response to receiving a processed packet from the application gateway part to the packet processor part, using the transmitted information to restore the original value of the source information field in that processed packet (Column 6, lines 31-57).

Regarding Claim 26,

Gbadegesin discloses, after the step of processing the packet at

the application gateway part, the further step of:

Forwarding such a processed packet from the application gateway

part towards an original destination that the packet had at the moment of

becoming intercepted, without circulating the forwarded packet through

the packet processor part (Column 10, lines 19-36).

Regarding Claim 27,

Gbadegesin discloses transmitting from the packet processor part

to the application gateway part information that associates each packet

redirected from the packet processor part to the application gateway part

with an original value of a certain destination information field that the

redirected packet had at the moment of it becoming intercepted (Column

8, line 53 to Column 9, line 5) and

After a packet has been processed at the application gateway part,

using the transmitted information to restore the original value of the

destination information field in that packet (Column 8, line 53 to Column 9,

line 5).

Regarding Claim 45,

Claim 45 is a method claim that is broader than method claim 27

and is rejected for the same reasons.

Regarding Claim 28,

Gbadegesin discloses transmitting from the packet processor part to the application gateway part information that associates each packet redirected form the packet processor part to the application gateway part with an original value of a certain source information field that the redirected packet had at the moment of it becoming intercepted (Column 6, lines 31-57; and Column 9, lines 26-44) and

After a packet has been processed at the application gateway part, using the transmitted information to restore the original value of the source information field in that packet (Column 9, lines 26-44).

Regarding Claim 46,

Claim 46 is a method claim that is broader than method claim 28 and is rejected for the same reasons.

Regarding Claim 29,

Gbadegesin discloses that the packets are handled in packet streams, all packets of an individual packet stream having the same values in certain source and destination information fields of each packet, and wherein if the first intercepted packet of a certain packet stream is found to contain digital data that pertains to the certain protocol, that packet and all subsequent packets belonging to the same packet stream are redirected to the application gateway part and processed at the application gateway part according to the set of processing rules based on

obedience to the certain protocol (Column 9, line 66 to Column 10, line

36).

Regarding Claim 30,

Gbadegesin discloses, within the first packet and all subsequent

packets of a certain packet stream that is found to contain digital data that

pertains to the certain protocol, replacing an original value of a certain

destination information field with a replacement value that identifies the

application gateway part as the destination of the packets, thus enabling

redirecting to the application gateway part (Column 9, line 66 to Column

10, line 36),

Indicating from the packet processor part to the application gateway

part the original value of the destination information field found in the first

redirected packet of a packet stream at the moment of intercepting the

packet at the packet processor part (Column 8, line 53 to Column 9, line 5)

and

Using the indicated original value of the destination information field

at the application gateway part in processing the packets of the redirected

packet stream (Column 8, line 53 to Column 9, line 5).

Regarding Claim 31,

Gbadegesin discloses, within the first packet and all subsequent

packets of a certain packet stream that is found to contain digital data that

pertains to the certain protocol, replacing also an original value of a certain

source information field with a replacement value that identifies the packet

processor part as the source of the packets (Column 6, lines 31-57; and

Column 9, lines 26-44),

Indicating from the packet processor part to the application gateway

part the original value of the source information field found in the first

redirected packet of a packet stream at the moment of intercepting the

packet at the packet processor part (Column 9, lines 26-44) and

Using the indicated original value of the source information field at

the application gateway part in processing the packets of the redirected

packet stream (Column 9, lines 26-44).

Regarding Claim 33,

Gbadegesin discloses that the packets of an individual packet

stream belong to an individual TCP connection (Column 7, lines 28-36).

Regarding Claim 34,

Gbadegesin discloses, between the steps of redirecting the packet

to the application gateway part and processing the packet at the

application gateway part, a step of removing from the redirected packet

any traces of it having been redirected, so that the application gateway

part processes the packet as if it had received the packet for processing

immediately after the packet was intercepted (Column 8, line 43 to

Column 9, line 5).

Regarding Claim 35,

Gbadegesin discloses, after the step of processing the packet at the application gateway part, the steps of:

Re-inserting into the processed packet the redirection information that was removed from the packet before processing the packet at the application gateway part, so that after the re-inserting the packet contains values that identify the application gateway part as the source and the packet processor part as the destination of the packet (Column 8, line 43 to Column 9, line 5),

Returning the processed packet from the application gateway part to the packet processor part (Column 8, line 43 to Column 9, line 5) and

Forwarding such a returned packet from the packet processor part towards an original destination that the packet had at the moment of it becoming intercepted (Column 8, line 43 to Column 9, line 5).

Regarding Claim 36,

Gbadegesin discloses, after a certain packet has been redirected from the packet processor part, dynamically establishing a new instruction for the packet processor part regarding the redirecting of subsequently arriving packets that have a certain relationship to the packet that was redirected from the packet processor part to the application gateway part (Column 6, line 58 to Column 7, line 2).

Regarding Claim 37,

Gbadegesin discloses detecting at the application gateway part that

a packet that was redirected from the packet processor part to the

application gateway part contains data that pertains to a certain control

channel defined in a protocol that also defines a data channel associated

with the control channel (Column 6, line 58 to Column 7, line 2; and

Column 10, lines 37-55),

Establishing a new instruction for the packet processor to redirect

to the application gateway part subsequently arriving packets that contain

data that pertains to the data channel (Column 6, line 58 to Column 7, line

2), and

Communicating the established new instruction from the application

gateway part to the packet processor part (Column 6, line 58 to Column 7,

line 2).

Regarding Claim 38,

Gbadegesin discloses detecting that a packet that was redirected

from the packet processor part to the application gateway part is

associated with a certain first port number and contains data that pertains

to a certain protocol that defines that also a certain second port number

should be reserved to that certain protocol (Column 8, line 43 to Column

9, line 5), and

Establishing a new instruction for the packet processor part to

redirect to the application gateway part subsequently arriving packets that

are associated with the second port number (Column 6, line 58 to Column 7, line 2).

Regarding Claim 49,

Gbadegesin discloses that the step of examining the packet in order to determine whether the packet contains digital data that pertains to a certain protocol involves handling the packet according to a set of packet filtering rules (Column 6, lines 31-57).

Regarding Claim 50,

Gbadegesin discloses that the step of examining the packet in order to determine whether the packet contains digital data that pertains to a certain protocol involves checking whether the packet belongs to a connection or flow all packets of which should be redirected to the application gateway part (Column 6, lines 31-57).

Regarding Claim 60,

Gbadegesin discloses that the second computer is arranged to run several application gateway parts as simultaneously or alternately active user mode processes (Column 6, line 58 to Column 7, line 2).

Regarding Claim 61,

Gbadegesin discloses several second computer devices, each of which has a communications connection with the first computer device and each of which is arranged to run at least one application gateway part as a user mode process (Column 4, lines 45-64).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3.   Claims 4, 15-17, 41, 42, 47, 48, 56, 57, 64, 65, 71, and 72 are rejected under 35

U.S.C. 103(a) as being unpatentable over Gbadegesin in view of Poier (U.S. Patent

Application Publication 2002/0124090).

Regarding Claim 4,

Gbadegesin does not disclose that steps of indicating the original

values of certain fields comprise transmitting the original values of such

fields from the packet processor part to the application gateway part

together with the redirected packet, the certain fields including at least one

of a source field and a destination field.

Poier, however, discloses that steps of indicating the original values

of certain fields comprise transmitting the original values of such fields

from the packet processor part to the application gateway part together

with the redirected packet, the certain fields including at least one of a

source field and a destination field (Page 3, Paragraph 22). It would have

been obvious to one of ordinary skill in the art at the time of applicant's

invention to incorporate the VPN of Poier into the NAT/application

gateway of Gbadegesin in order to allow the NAT and application gateway to deal with encrypted packets that are part of a VPN connection.

Regarding Claim 15,

Gbadegesin discloses, regarding a packet that is redirected from the packet processor part to the application gateway part:

Using the original value of a destination information field in the packet at the application gateway part in processing the packet (Column 8, line 53 to Column 9, line 5), but does not disclose prepending a header to the packet at the packet processor part, the prepended header containing a value that identifies the application gateway part as the destination of the packet and stripping the header from the packet at the application gateway part.

Poier, however, discloses prepending a header to the packet at the packet processor part, the prepended header containing a value that identifies the application gateway part as the destination of the packet (Page 3, Paragraph 22), and stripping the header from the packet at the application gateway part (Page 3, Paragraph 22). It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to incorporate the VPN of Poier into the NAT/application gateway of Gbadegesin in order to allow the NAT and application gateway to deal with encrypted packets that are part of a VPN connection.

Regarding Claim 41,

Claim 41 is a method claim that is broader than method claim 15

and is rejected for the same reasons.

Regarding Claim 47,

Claim 47 is a method claim that is broader than method claim 15

and is rejected for the same reasons.

Regarding Claim 56,

Claim 56 is a system claim that corresponds to method claim 15

and is rejected for the same reasons.

Regarding Claim 64,

Claim 64 is a device claim that is broader than method claim 15

and is rejected for the same reasons.

Regarding Claim 71,

Claim 71 is a software program product claim that is broader than

method claim 15 and is rejected for the same reasons.

Regarding Claim 16,

Gbadegesin as modified by Poier disclose the method of claim 15,

in addition, Poier discloses that the prepended header also contains a

value that identifies the packet processor part as the source of the packet

(Page 3, Paragraph 22).

Regarding Claim 42,

Claim 42 is a method claim that is broader than method claim 16

and is rejected for the same reasons.

Regarding claim 48,

> Claim 48 is a method claim that is broader than method claim 16 and is rejected for the same reasons.

Regarding Claim 57,

> Claim 57 is a system claim that corresponds to method claim 16 and is rejected for the same reasons.

Regarding Claim 65,

> Claim 65 is a device claim that corresponds to method claim 16 and is rejected for the same reasons.

Regarding Claim 72,

> Claim 72 is a software program product claim that is broader than method claim 16 and is rejected for the same reasons.

Regarding Claim 17,

> Gbadegesin does not disclose enveloping the original packet to be redirected from the packet processor part to the application gateway part into an enveloping packet and extracting the original packet from the enveloping packet.

> Poier, however, discloses, at the packet processor part:

> Enveloping an original packet to be redirected from the packet processor part to the application gateway part into an enveloping packet (Page 3, Paragraph 22; and Figure 7); and

> At the application gateway part:

Extracting the original packet from the enveloping packet (Page 3,

Paragraph 22; and Figure 7).

It would have been obvious to one of ordinary skill in the art at the

time of applicant's invention to incorporate the VPN of Poier into the

NAT/application gateway of Gbadegesin in order to allow the NAT and

application gateway to deal with encrypted packets that are part of a VPN

connection.

4.   Claims 5 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Gbadegesin in view of Poier, further in view of TCP ("The TCP Datagram, I wanted to

know and now you can too (part 2)", 4/8/2001, pp. 1-3, obtained from

http://web.archive.org/web/20010408184021/http://www.daemon.org/tcp.html).

Regarding Claim 5,

Gbadegesin as modified by Poier disclose the method of claim 4,

and further, at the packet processor part:

Setting the value of a certain bit in the packet to indicate the

presence of urgent information within the packet (Gbadegesin: Column 9,

lines 6-25),

Inserting the original values of the certain fields into the packet

immediately before the location pointed at by the pointer value (Poier:

Page 3, Paragraph 22); and

At the application gateway part:

Reading the original values of the certain fields from the location in the packet pointed at by the pointer value (Poier: Page 3, Paragraph 22);

But do not explicitly disclose inserting into a pointer field in the packet a pointer value that points at the end of urgent information within the packet.

TCP, however, discloses inserting into a pointer field in the packet a pointer value that points at the end of urgent information within the packet (Pages 1-2). It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to incorporate the datagram of TCP into the NAT/application gateway of Gbadegesin as modified by Poier because TCP is already used within the combination. The reference is solely needed as evidence of what fields are within TCP.

Regarding Claim 6,

Gbadegesin as modified by Poier disclose the method of claim 4, and further, at the packet processor part:

Using the TCP protocol (Gbadegesin: Column 9, lines 6-25),

Inserting the original values of the certain fields into the packet (Poier: Page 3, Paragraph 22); and

At the application gateway part:

Reading the original values of the certain fields from the packet · (Poier: Page 3, Paragraph 22).

Setting the value of an options field in the packet to indicate the

presence of optional information within the packet (Pages 2-3). It would

have been obvious to one of ordinary skill in the art at the time of

applicant's invention to incorporate the datagram of TCP into the

NAT/application gateway of Gbadegesin as modified by Poier because

TCP is already used within the combination. The reference is solely

needed as evidence of what fields are within TCP.

5.   Claims 9, 10, and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable

over Gbadegesin in view of UDP (Ross et al., "3.3 Connectionless Transport: UDP",

2000, pp. 1-6, obtained from http://www-net.cs.umass.edu/kurose/transport/UDP.html).

Regarding Claim 9,

Gbadegesin does not disclose that the messaging packet is a UDP

packet.

UDP, however, discloses that the messaging packet is a UDP

packet (Pages 1-5). It would have been obvious to one of ordinary skill in

the art at the time of applicant's invention to incorporate the protocol of

UDP into the NAT/application gateway of Gbadegesin in order to provide a

fast protocol that can be used for sending information without requiring

setup and maintenance of a connection.

Regarding Claim 10,

Gbadegesin does not disclose that the step of transmitting the messaging packet to the application gateway part is performed more than once in order to transmit several redundant copies of the messaging packet to the application gateway part.

UDP, however, discloses that the step of transmitting the messaging packet to the application gateway part is performed more than once in order to transmit several redundant copies of the messaging packet to the application gateway part (Page 1). It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to incorporate the protocol of UDP into the NAT/application gateway of Gbadegesin in order to provide a fast protocol that can be used for sending information without requiring setup and maintenance of a connection.

Regarding Claim 32,

Gbadegesin does not disclose that the step of indicating from the packet processor part to the application gateway part the original values of certain information fields comprises at least one repetition in order to transmit redundant indications from the packet processor part to the application gateway part.

UDP, however, discloses that the step of indicating from the packet processor part to the application gateway part the original values of certain information fields comprises at least one repetition in order to transmit

redundant indications from the packet processor part to the application

gateway part (Page 1). It would have been obvious to one of ordinary skill

in the art at the time of applicant's invention to incorporate the protocol of

UDP into the NAT/application gateway of Gbadegesin in order to provide a

fast protocol that can be used for sending information without requiring

setup and maintenance of a connection.

6.   Claims 11 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable

over Gbadegesin in view of Cheng (Cheng et al., "WTCP: an Efficient Transmission

Control Protocol for Wired/Wireless Internetworking", 11/11/1999, pp. 176-185, obtained

from http://nr.stic.gov.tw/ejournal/ProceedingA/v24n3/176-185.pdf).

        Regarding Claim 11,

                Gbadegesin does not disclose that the sender transmits the packet

        to the receiver spontaneously.

                Cheng, however, discloses that the sender transmits the packet to

        the receiver spontaneously (Page 177, Section 1). It would have been

        obvious to one of ordinary skill in the art at the time of applicant's invention

        to incorporate the transmission control protocol of Cheng into the

        NAT/application gateway of Gbadegesin in order to allow the system to

        deal with dropped packets and dynamically change its setup so that less

        packets will be dropped during the session.

        Regarding Claim 13,

Gbadegesin discloses that the application gateway part (receiver) transmits to the packet processor part (sender) a query for the original values of the certain fields, so that the packet processor part also transmits the original values of the certain fields to the application gateway part as a response to the query (Column 9, lines 26-44), but does not disclose that the sender transmits the packet to the receiver spontaneously, and if the receiver has not received such spontaneously transmitted packet within a certain time limit, the sender re-sends the packet to the receiver.

Cheng, however, discloses that the sender transmits the packet to the receiver spontaneously, and if the receiver has not received such spontaneously transmitted packet within a certain time limit, the sender re-sends the packet to the receiver (Page 177, Section 1). It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to incorporate the transmission control protocol of Cheng into the NAT/application gateway of Gbadegesin in order to allow the system to deal with dropped packets and dynamically change its setup so that less packets will be dropped during the session.

7.   Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gbadegesin in view of Poier, further in view of Leech (Leech et al., "RFC 1928 –

SOCKS Protocol Version 5", 3/1996, pp. 1-8, obtained from

http://www.faqs.org/rfcs/rfc1928.html).

Gbadegesin as modified by Poier does not disclose a packet according to

the SOCKS protocol.

Leech, however, discloses a packet according to the SOCKS protocol

(Pages 1-8). It would have been obvious to one of ordinary skill in the art at the

time of applicant's invention to incorporate the SOCKS protocol of Leech into the

NAT/application gateway of Gbadegesin as modified by Poier in order to provide

authentication of the NAT to the application gateway, thus making the system

more secure.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time

policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later

than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the
examiner should be directed to Jeffrey D. Popham whose telephone number is (571)-
272-7215. The examiner can normally be reached on M-F 9:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's
supervisor, Emmanuel Moise can be reached on (571)272-3865. The fax phone
number for the organization where this application or proceeding is assigned is 571-
273-8300.

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Jeffrey D Popham
Examiner
Art Unit 2137
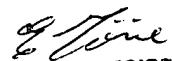
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